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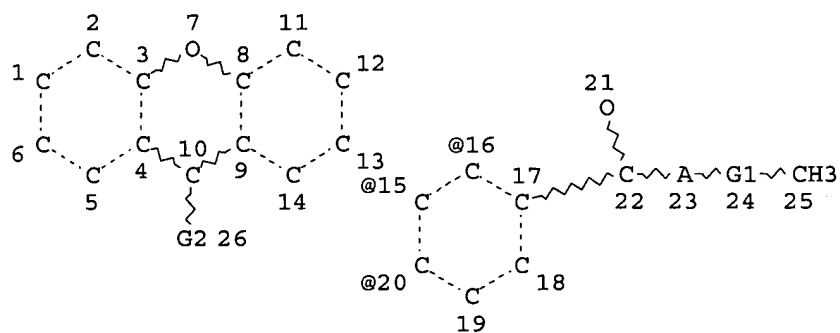
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L1 HAS NO ANSWERS

L1 STR



REP G1=(16-20) CH2

VAR G2=16/15/20

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 26

STEREO ATTRIBUTES: NONE

=> s l1 ful

FULL SEARCH INITIATED 13:34:27 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 11016 TO ITERATE

100.0% PROCESSED 11016 ITERATIONS

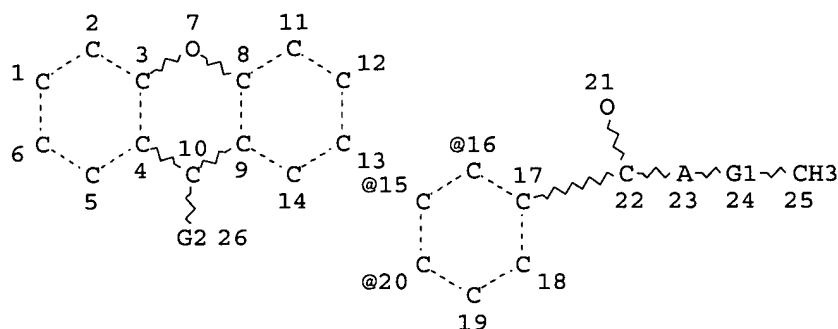
SEARCH TIME: 00.00.06

29 ANSWERS

L3

29 SEA SSS FUL L1

L1 HAS NO ANSWERS  
L1 STR



REP G1=(16-20) CH2  
VAR G2=16/15/20  
NODE ATTRIBUTES:  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 26

STEREO ATTRIBUTES: NONE

=> s l1 ful  
FULL SEARCH INITIATED 13:34:27 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 11016 TO ITERATE

100.0% PROCESSED 11016 ITERATIONS  
SEARCH TIME: 00.00.06

29 ANSWERS

L3 29 SEA SSS FUL L1

=> fil caplus  
COST IN U.S. DOLLARS  
FULL ESTIMATED COST

SINCE FILE	TOTAL
ENTRY	SESSION
142.78	142.93

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FILE COVERS 1907 - 22 Mar 2002 VOL 136 ISS 13  
FILE LAST UPDATED: 21 Mar 2002 (20020321/ED)

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=> s l3

L4 131 L3

=> s l4 and py<1996

16578332 PY<1996

L5 82 L4 AND PY<1996

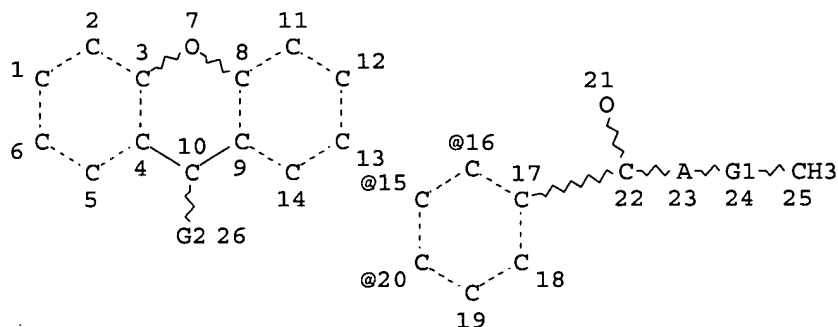
=> s l5 and (ink or dye or photo?)

52457 INK

214924 DYE

1110833 PHOTO?

L6 40 L5 AND (INK OR DYE OR PHOTO?)



REP G1=(16-20) CH2  
 VAR G2=16/15/20  
 ENTER (DIS), GRA, NOD, BON OR ?:end  
 L7 STRUCTURE CREATED

=> search l7  
 ENTER TYPE OF SEARCH (SSS), CSS, FAMILY, OR EXACT:sss  
 ENTER SCOPE OF SEARCH (SAMPLE), FULL, RANGE, OR SUBSET:subset  
 ENTER SUBSET L# OR (END):l3  
 ENTER SUBSET SEARCH SCOPE - SAMPLE, FULL, RANGE, OR (END):ful  
 FULL SUBSET SEARCH INITIATED 13:38:03 FILE 'REGISTRY'  
 FULL SUBSET SCREEN SEARCH COMPLETED - 1 TO ITERATE

100.0% PROCESSED 1 ITERATIONS 1 ANSWERS  
 SEARCH TIME: 00.00.02

L8 1 SEA SUB=L3 SSS FUL L7

=> fil caplus		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	33.69	210.81
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-3.72

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FILE COVERS 1907 - 22 Mar 2002 VOL 136 ISS 13  
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=> s l8

L9 3 L8

=> d bib abs 1-3

L9 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2002 ACS

AN 2000:803380 CAPLUS

DN 134:80235

TI Micrometer-sized lithium ion-selective microoptodes based on a "tailed" neutral ionophore and a fluorescent anionic dye

AU Kurihara, K.; Ohtsu, M.; Yoshida, T.; Abe, T.; Hisamoto, H.; Suzuki, K.

CS Kanagawa Academy of Science and Technology, Takatsu-ku, Kawasaki, 213-0012, Japan

SO Analytica Chimica Acta (2001), 426(1), 11-18

CODEN: ACACAM; ISSN: 0003-2670

PB Elsevier Science B.V.

DT Journal

LA English

AB The prepn. and response features of a micrometer-sized lithium ion-selective optode based on a liq. membrane were examd. The optode membrane was a plasticized poly(vinyl chloride) (PVC)-based copolymer incorporating a lipophilic 14-crown-4 deriv. as the neutral lithium ionophore and a dibromofluorescein deriv. as the fluorescent anionic dye. The detection mode was a fluorescence change based on the ion-pair extn./ion exchange principle caused by the fluorescent anionic dye and the lithium ionophore. The 5-.mu.m-sized microoptode was prepd. by the micropipette fabrication method and characterized by measuring the optical responses to Li+ concns. with the time-resolved photon counting method. The microoptode responded to lithium ion concns. of .apprx.0.5 to .apprx.500 mM. The micrometer-sized lithium ion-selective microoptode was successfully obtained when a tailed ionophore was used. The anchor effect of the tailed ionophore was useful for the lithium ion-selective microoptode to resolve leaching of the ionophore, which is a significant problem in a microoptode based on a liq. membrane. This demonstration indicates that other ion-selective microoptodes can be obtained simply by replacing the tailed ionophore.

RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2002 ACS

AN 1999:249246 CAPLUS

DN 131:12990

TI Hydrogen sulfite optical sensor based on a lipophilic guanidinium ionophore

AU Badr, Ibrahim H. A.; Plata, Anadellys; Molina, Pedro; Alajarin, Mateo; Vidal, Angel; Bachas, Leonidas G.

CS Department of Chemistry, University of Kentucky, Lexington, KY, 40506-0055, USA

SO Anal. Chim. Acta (1999), 388(1-2), 63-69

CODEN: ACACAM; ISSN: 0003-2670

PB Elsevier Science B.V.

DT Journal

LA English  
AB An optical chem. sensor is described for the sensitive and selective detection of hydrogen sulfite. The optode membrane is constructed by entrapping within a plasticized poly(vinyl chloride) membrane a hydrogen sulfite selective carrier (a lipophilic multicyclic guanidinium ionophore) and a proton chromoionophore (4',5'-dibromofluorescein octadecyl ester). Due to selective transport of hydrogen sulfite into the membrane by the guanidinium-based ionophore, protons are coexd. into the polymeric membrane phase leading to a change in the ratio of the protonated and deprotonated form of the chromoionophore, and consequently a change in the absorbance value. The optode membrane shows a reproducible and reversible response toward hydrogen sulfite in the concn. range 0.02-0.1 M in 50 mM MES buffer, pH 5.5. The optode membrane is more selective toward hydrogen sulfite than other anions, including the more lipophilic anions (e.g., thiocyanate, perchlorate, iodide and nitrate).

RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2002 ACS  
AN 1992:200006 CAPLUS  
DN 116:200006  
TI Selective ionophore-based optical sensors for ammonia measurement in air  
AU West, Steven J.; Ozawa, Satoshi; Seiler, Kurt; Tan, Susie S. S.; Simon, Wilhelm  
CS Dep. Org. Chem., Swiss Fed. Inst. Technol., Zurich, CH-8092, Switz.  
SO Anal. Chem. (1992), 64(5), 533-40  
CODEN: ANCHAM; ISSN: 0003-2700  
DT Journal  
LA English  
AB Optical sensors (optrodes) based on the incorporation of NH<sub>4</sub> ion-selective ionophores and H ion-selective chromoionophores in plasticized poly(vinyl chloride) (PVC) membranes are applied to the measurement of NH<sub>3</sub> in air. The dynamic response characteristics and selectivities for NH<sub>3</sub> with respect to other normally occurring gases under varying relative humidity are studied for several membrane formulations. No significant interference occurs from relevant levels of SO<sub>2</sub>, NO<sub>2</sub>, or CO<sub>2</sub>, but a trade-off between selectivity over other amines vs. insensitivity to changes in relative humidity is found. An optrode formulated with the ionophore valinomycin, which forms a comparatively strong complex with NH<sub>4</sub><sup>+</sup> ion, prefers NH<sub>3</sub> over the alkylamines tested, but is affected significantly by humidity changes. An optrode based on the ionophore ETH 157, which forms a weaker NH<sub>4</sub> complex, shows no humidity effect but responds approx. equally to low levels of EtNH<sub>2</sub>, MeNH<sub>2</sub>, and NH<sub>3</sub>. In the exptl. configuration described, the latter optrode has a range of 0.002-100 ppm and t<sub>95</sub> response times varying from 230 s at 0.05 ppm (by vol.) to 15 s at 100 ppm. A proposed optimization of the optical geometry promises to yield sub-ppb detection limits and faster response times in future studies. There is no deterioration in response after 4 mo in lab. air.

=> d bib abs hitstr 3

L9 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2002 ACS  
AN 1992:200006 CAPLUS  
DN 116:200006  
TI Selective ionophore-based optical sensors for ammonia measurement in air  
AU West, Steven J.; Ozawa, Satoshi; Seiler, Kurt; Tan, Susie S. S.; Simon, Wilhelm  
CS Dep. Org. Chem., Swiss Fed. Inst. Technol., Zurich, CH-8092, Switz.  
SO Anal. Chem. (1992), 64(5), 533-40  
CODEN: ANCHAM; ISSN: 0003-2700  
DT Journal  
LA English

AB Optical sensors (optrodes) based on the incorporation of NH<sub>4</sub> ion-selective ionophores and H ion-selective chromoionophores in plasticized poly(vinyl chloride) (PVC) membranes are applied to the measurement of NH<sub>3</sub> in air. The dynamic response characteristics and selectivities for NH<sub>3</sub> with respect to other normally occurring gases under varying relative humidity are studied for several membrane formulations. No significant interference occurs from relevant levels of SO<sub>2</sub>, NO<sub>2</sub>, or CO<sub>2</sub>, but a trade-off between selectivity over other amines vs. insensitivity to changes in relative humidity is found. An optrode formulated with the ionophore valinomycin, which forms a comparatively strong complex with NH<sub>4</sub><sup>+</sup> ion, prefers NH<sub>3</sub> over the alkylamines tested, but is affected significantly by humidity changes. An optrode based on the ionophore ETH 157, which forms a weaker NH<sub>4</sub> complex, shows no humidity effect but responds approx. equally to low levels of EtNH<sub>2</sub>, MeNH<sub>2</sub>, and NH<sub>3</sub>. In the exptl. configuration described, the latter optrode has a range of 0.002-100 ppm and t<sub>95</sub> response times varying from 230 s at 0.05 ppm (by vol.) to 15 s at 100 ppm. A proposed optimization of the optical geometry promises to yield sub-ppb detection limits and faster response times in future studies. There is no deterioration in response after 4 mo in lab. air.

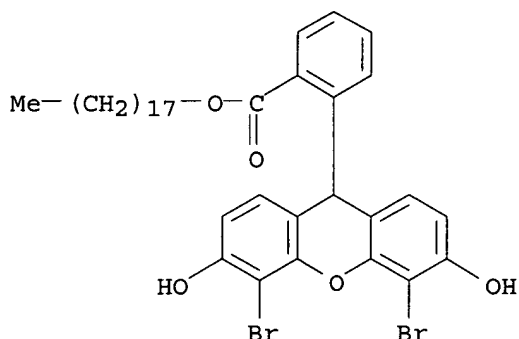
IT 138337-12-9

RL: ANST (Analytical study)

(ionophore, in optical sensors, for ammonia detection in air)

RN 138337-12-9 CAPLUS

CN Benzoic acid, 2-(4,5-dibromo-3,6-dihydroxy-9H-xanthen-9-yl)-, octadecyl ester (9CI) (CA INDEX NAME)



=> d his

(FILE 'HOME' ENTERED AT 13:28:21 ON 22 MAR 2002)

FILE 'REGISTRY' ENTERED AT 13:29:08 ON 22 MAR 2002

L1 STRUC  
L2 1 S L1  
L3 29 S L1 FUL

FILE 'CAPLUS' ENTERED AT 13:34:36 ON 22 MAR 2002

L4 131 S L3  
L5 82 S L4 AND PY<1996  
L6 40 S L5 AND (INK OR DYE OR PHOTO?)

FILE 'REGISTRY' ENTERED AT 13:36:59 ON 22 MAR 2002

L7 STRUC  
L8 1 SEARCH L7 SSS SUB=L3 FUL

FILE 'CAPLUS' ENTERED AT 13:38:10 ON 22 MAR 2002

L9 3 S L8



=> s 14 and (ionophor? or optic?)  
42037 IONOPHOR?  
717808 OPTIC?  
L10 39 L4 AND (IONOPHOR? OR OPTIC?)

=> d hitstr 39

L10 ANSWER 39 OF 39 CAPLUS COPYRIGHT 2002 ACS

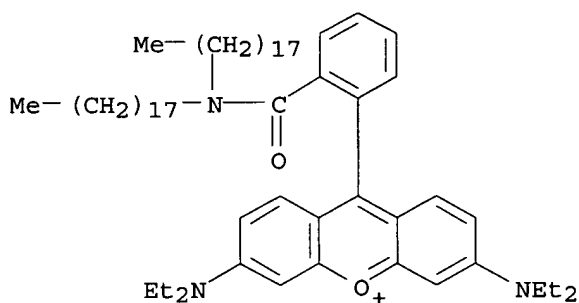
IT 103941-64-6

RL: PRP (Properties)

(adsorbed film of, on **optically** transparent electrodes,  
photoelectrochem. properties in relation to)

RN 103941-64-6 CAPLUS

CN Xanthylum, 3,6-bis(diethylamino)-9-[2-[(dioctadecylamino)carbonyl]phenyl]-  
, chloride (9CI) (CA INDEX NAME)



O Cl<sup>-</sup>

=> d bib abs hitstr 39

L10 ANSWER 39 OF 39 CAPLUS COPYRIGHT 2002 ACS

AN 1986:503254 CAPLUS

DN 105:103254

TI Dye sensitization of tin dioxide and gold electrodes chemically modified  
with Langmuir-Blodgett films of surfactant derivatives of Rhodamine B and  
ruthenium bipyridine Ru(II) (bpy)32+ complexes

AU Fujihira, M.; Aoki, K.; Inoue, S.; Takemura, H.; Muraki, H.; Aoyagui, S.

CS Dep. Chem. Eng., Tokyo Inst. Technol., Tokyo, 152, Japan

SO Thin Solid Films (1985), 132, 221-8

CODEN: THSFAP; ISSN: 0040-6090

DT Journal

LA English

AB Three kinds of surfactant derivs. of Rhodamine B and Ru(bpy)32+ complexes  
with 2 long alkyl chains were synthesized. Surfaces of **optically**  
transparent SnO2 electrodes (SnO2 OTEs) and of **optically**  
semitransparent vapor-deposited-Au film electrodes on quartz (Au OTEs)  
were coated with (1) a Langmuir-Blodgett (LB) film of the dye surfactant  
itself, (2) a mixed film with arachidic acid or its Cd or Ca salt, or (3)  
a dye surfactant LB film with a spacer of arachidic acid or its salt. The  
thickness of the spacer was controlled by the no. of arachidic monolayers.  
The photoelectrochem. characteristics and some physicochem. properties,  
i.e. UV-visible absorption and emission spectra, of the LB-film-modified  
SnO2 OTEs and Au OTEs are discussed mainly in terms of the distance  
between the electrode surface and the excited dye moiety.

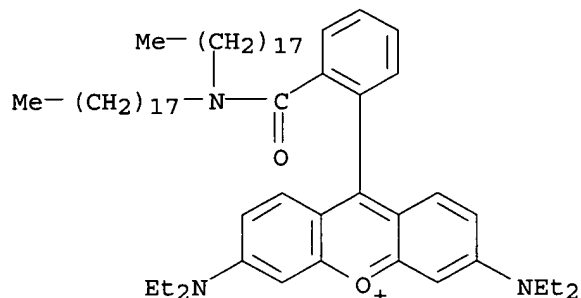
IT 103941-64-6

RL: PRP (Properties)

(adsorbed film of, on **optically** transparent electrodes,  
photoelectrochem. properties in relation to)

RN 103941-64-6 CAPLUS

CN Xanthylium, 3,6-bis(diethylamino)-9-[2-[(dioctadecylamino)carbonyl]phenyl]-  
, chloride (9CI) (CA INDEX NAME)



O Cl<sup>-</sup>

=> d hitstr 38

L10 ANSWER 38 OF 39 CAPLUS COPYRIGHT 2002 ACS

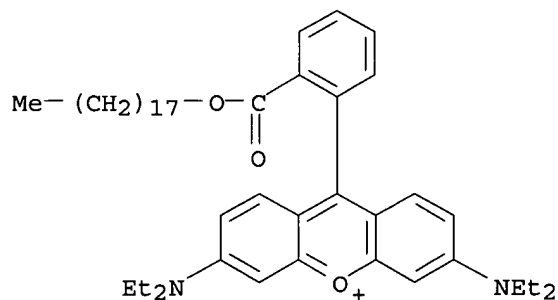
IT 65603-19-2

RL: PRP (Properties)

(energy transfer and fluorescence of, in dioleoylglycerophosphocholine  
vesicles)

RN 65603-19-2 CAPLUS

CN Xanthylium, 3,6-bis(diethylamino)-9-[2-[(octadecyloxy)carbonyl]phenyl]-,  
chloride (9CI) (CA INDEX NAME)



O Cl<sup>-</sup>

=> d bib abs hitstr 38

L10 ANSWER 38 OF 39 CAPLUS COPYRIGHT 2002 ACS

AN 1987:204451 CAPLUS

DN 106:204451

TI Electronic energy transfer in anisotropic systems. 1. Octadecylrhodamine

B in vesicles

AU Johansson, Lennart B. A.; Niemi, Alf

CS Dep. Phys. Chem., Univ. Umea, Umea, S-901 87, Swed.

SO J. Phys. Chem. (1987), 91(11), 3020-3

CODEN: JPCCHX; ISSN: 0022-3654

DT Journal

LA English

AB Electronic energy transfer between octadecylrhodamine B (C18RhB) solubilized in unilamellar vesicles of 1,2-dioleoyl-sn-glycero-3-phosphocholine (DOPC) was studied. The quantum yield of fluorescence and the steady-state fluorescence anisotropy were measured at various temps. and concns. of C18RhB. Rhodamine B chloride (RhB) was used as a ref. in the measurements of the quantum yield. For this purpose it was necessary to det. the molar absorptivity and the fluorescence lifetime at different temps. The fluorescence decay of RhB in EtOH is monoexponential with a lifetime that continuously decreases from 3.6 ns at 265 K to 1.9 ns at 32 K. The radiative lifetime is 4.2 ns. From linear dichroism (LD) measurements the orientation of C18RhB solubilized in macroscopically aligned lipid bilayers was detd. No energy transfer could be detected when the mol fraction of C18RhB in the vesicles was  $\sim 10^{-4}$ . Donor-donor and donor-acceptor (traps) transfer occur at concns.  $\sim 10^{-4}$  and  $\sim 10^{-3}$ , resp. The latter is most probably due to the formation of ground-state dimers of C18RhB. The rate of energy transfer in anisotropic systems can be sensitive to and enhanced by the rotational motions of the interacting fluorophores.

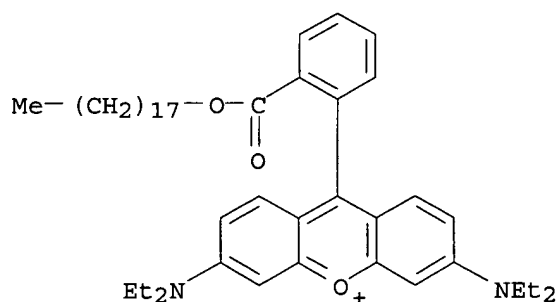
IT 65603-19-2

RL: PRP (Properties)

(energy transfer and fluorescence of, in dioleoylglycerophosphocholine vesicles)

RN 65603-19-2 CAPLUS

CN Xanthylum, 3,6-bis(diethylamino)-9-[2-[(octadecyloxy)carbonyl]phenyl]-, chloride (9CI) (CA INDEX NAME)



O Cl<sup>-</sup>